Oil Free Bushings / Oil Free Bushing Housing Units - Standard Flanged

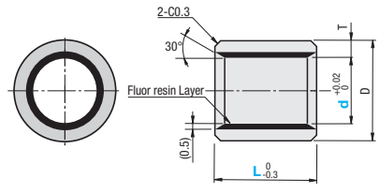
High Precision　　Built-In Multi-Layer LF Bushings

Features: More precise linear and rotary motion compared to Multi-Layer LF Bushings - Straight (MDZB) can be achieved by keeping the clearance between bushings and g6 shafts small.

High Precision

RoHS10

BFLB



- BFLB is specifically effective if the mating material is soft such as stainless steel, aluminum, brass, etc. (Soft mating material is hardly damaged.)
- Excels in relative wear amount: 1.6×10^{-7} mm³/N・m and abrasion resistance. (It varies depending on condition of use.)

- **Applicable to linear and rotary motion.**
- Loctite (thread locking adhesive) is recommended to affix bushings.

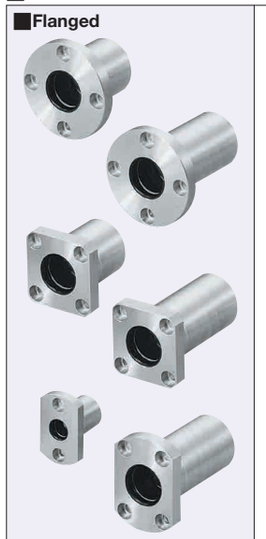
M Material: Base Material: A2017
Sliding Material: Fluororesin
* Base and sliding materials are bonded.
Allowable Temperature: -50~140°C

Part Number Type	d	L	D	Tolerance	T	Unit Price L5~8	L10~15	L20~25
BFLB	4	5 6	7	0 -0.015	1.5		-	-
	5	5 6 8	8				-	-
	6	5 6 8 10 12	9					-
	8	6 8 10 12 15	11					-
	10	6 8 10 12 15 20	13					
	12	10 12 15 20	15			-		
	16	15 20 25	19	0 -0.020		-		

Ordering Example: Part Number - L
BFLB10 - 10

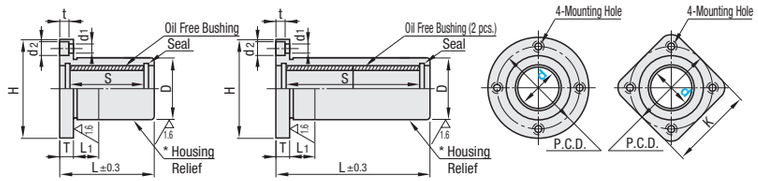
Features: Suitable for vertical use. Reduces the time of manufacturing and assembling the housing.

Flanged

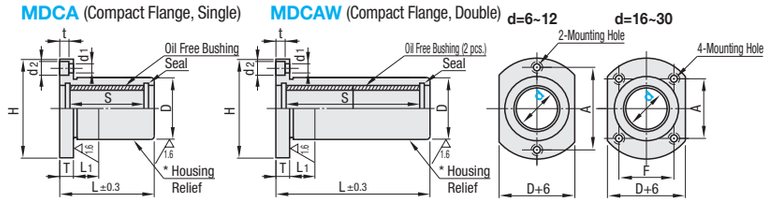


RoHS10

MDRA (Round Flange, Single)　**MDRAW** (Round Flange, Double)
MDSA (Square Flange, Single)　**MDSAW** (Square Flange, Double)



MDCA (Compact Flange, Single)　**MDCAW** (Compact Flange, Double)



Bushing: MDZB (**P.398**)
Seals: NBR (O-Ring)
* Housing Relief　When D≤28, D -0.1 -0.3　When D≥32, D -0.3 -0.5

- Perpendicularity of flange bottom plane to surface D is 0.02 or less.
- Effective length of D Tolerance below is L1.
- 2 Oil Free Bushings are included in Single Type d25, d30.

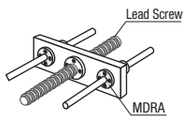
M Material: Aluminum Alloy (Housing)
S Surface Treatment: Clear Anodize

Part Number Type	d	Tolerance	D	Tolerance	L Single	L Double	L1	S Single	S Double	H	T	d1	d2	t	P.C.D.	K	F	A	Unit Price MDRA	MDRAW	MDSA	MDSAW	MDCA	MDCAW
MDRA MDRAW (Round Flange)	6	+0.065 0	12	0 -0.013	19	32	5	13	26	28	5	3.5	6	3.1	20	22	-	20						
	8		15		24	38		18	32	32					24	25		24						
	10	+0.068 0	19	0 -0.016	29	50	10	21	42	40	6	4.5	7.5	4.1	29	30		29						
MDSA MDSAW (Square Flange)	12		21		30	51		21.6	42.6	42					32	32		32						
	16		28		37	63		26.6	52.6	48					38	37	22	31						
MDCA MDCAW (Compact Flange)	20	+0.081 0	32	0 -0.019	42	73		31.6	62.6	54	8	5.5	9	5.1	43	42	24	36						
	25		40		59	103		48.6	92.6	62					51	50	32	40						
	30	+0.085 0	45		64	115		51.6	102.6	74	10	6.6	11	6.1	60	58	35	49						

Flanged Height-Adjusting Spacers are selectable from P.330.

Ordering Example: Part Number
MDRA10

Example



Oil Free Bushing Housing Units - Blocks

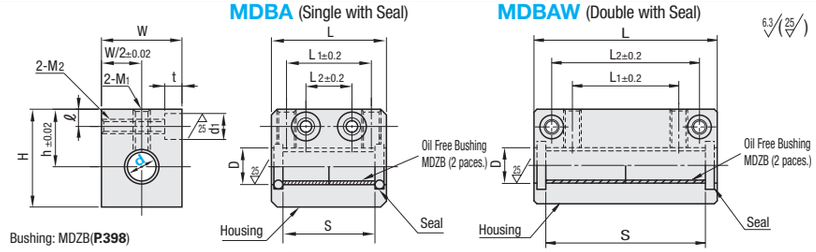
Built-In Multi-Layer LF Bushings - Tall Blocks / Tall Blocks Compact / Wide Blocks

Features: Best suitable for horizontal use. Reduces the time of manufacturing and assembling the housing. Compact in width (W Dimension) compared to Wide Blocks Type.

Tall Blocks Standard Type

RoHS10

MDBA (Single with Seal)　**MDBAW** (Double with Seal)



Bushing: MDZB(**P.398**)
Seals: NBR (O-Ring)
M Material: Aluminum Alloy (Housing)
S Surface Treatment: Clear Anodize

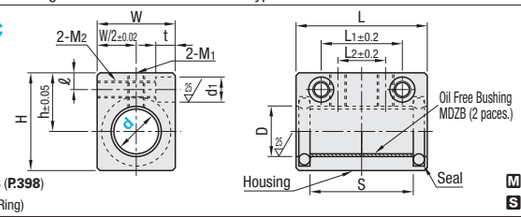
Part Number Type	d	Tolerance	h	W	H	D	Single L	Single L1	Single L2	Single S	Double L	Double L1	Double L2	Double S	ℓ	M1	M2	d1xt	Unit Price MDBA	MDBAW
MDBA MDBAW	6	+0.065 0	14	16	22	8.1	27	18	9	21	-	-	-	-	5	M4	M4	6x5 (for M3 Screws)		-
	8		16	20	26	10.1	32	20	10	26	-	-	-	-		M5				-
	10	+0.068 0	19	26	32	12.2	39	27	15	31	62	36	50	54	6	M6	M5	8x6 (for M4 Screws)		
	12		20	28	34	14.3	40			32				54						
	16		27	36	49	18.3	47	32	18	37	78	52	65	68	7		M6	9x7 (for M5 Screws)		
	20	+0.081 0	31	42	54	23.4	52	36		42	85	58	70	75	8	M8	M8	11x8 (for M6 Screws)		
	25		37	52	65	28.4	69	42	22	59	120	80	100	110	9	M10	M10	14x10 (for M8 Screws)		
	30	+0.085 0	40	58	71	34.4	74	44		62	128	90	110	116						

Features: Best suitable for horizontal use. Reduces the time of manufacturing and assembling the housing. More compact housing compared to Housing Unit - Tall Blocks - Standard Type.

Tall Blocks Compact Type

RoHS10

MDBAC



Bushing: MDZB (**P.398**)
Seals: NBR (O-Ring)
M Material: Aluminum Alloy (Housing)
S Surface Treatment: Clear Anodize

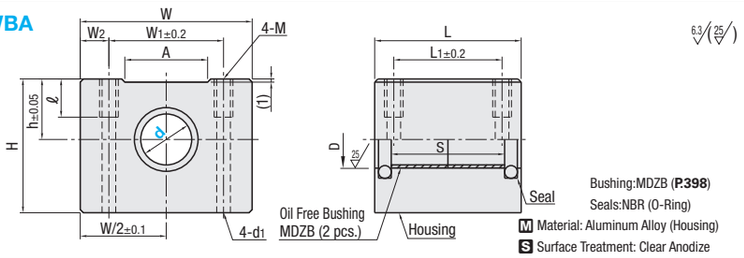
Part Number Type	d	Tolerance	h	W	H	D	L	L1	L2	S	ℓ	M1	M2	d1xt	Unit Price
MDBAC	10	+0.068 0	17	20	26	12.2	39	25	13	31	5	M6	M5	8x6 (for M4 Screws)	
	12		18	22	28	14.3	40	26	14	32	5				
	16		21	28	35	18.3	47	28	15	37	5.5		M6	9x7 (for M5 Screws)	
	20	+0.081 0	24	34	40	23.4	52	34	21	42	5.5				
	25		30	42	50	28.4	69	42	25	59	8	M8	M8	11x8 (for M6 Screws)	
	30	+0.085 0	33	48	57	34.4	74	54	37	62	8				

Features: Best suitable for horizontal use. Reduces the time of manufacturing and assembling the housing. Sufficient clamping strength can be obtained with 4 Mounting Holes.

Wide Blocks Standard Type

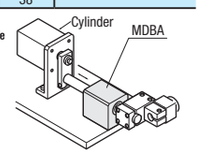
RoHS10

MDWBA



Bushing:MDZB (**P.398**)
Seals:NBR (O-Ring)
M Material: Aluminum Alloy (Housing)
S Surface Treatment: Clear Anodize

Part Number Type	d	Tolerance	h	W	H	D	L	L1	S	W1	W2	M	d1	ℓ	A	Unit Price
MDWBA	6	+0.065 0	9	34	20	8.1	27	15	21	20	7	M4	3.4	8	10	
	8		11	34	20	10.1	32	18	26	24	5	M4	3.4	8	10	
	10	+0.068 0	13	44	30	12.2	39	21	31	28	8	M5	4.3	12	20	
	12		15	44	30	14.3	40	26	32	30.5	6.75	M5	4.3	12	20	
	16		19	54	42	18.3	47	34	37	36	9	M5	4.3	12	26	
	20	+0.081 0	21	54	42	23.4	52	40	42	40	7	M6	5.2	12	26	
	25		26	78	60	28.4	67	50	59	54	12	M8	7	18	38	
	30	+0.085 0	30	78	60	34.4	74	58	62	58	10	M8	7	18	38	

Ordering Example: Part Number
MDBA10
MDBAC12
MDWBA16

Example